

OVERWINTERING ORTHOPTERA AND OTHER INSECTS IN CRETE

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BEING A LARGE ISLAND at the extreme south-eastern corner of Europe, with habitat zones ranging from Mediterranean littoral to Alpine, Crete may be expected to have a diverse Orthoptera fauna (Willemse, 1984, Willemse & Kruseman, 1976). Most members of this fauna, especially the montane species, are European in origin and pass the winter as eggs to become adult in summer. A significant proportion of Cretan Orthoptera in the hotter coastal habitats are northern outliers of taxa associated with Africa and the Middle East whose strategy is to breed during the wet season or whose life-cycle is unrestricted by a need for winter diapause in the egg stage. Around the Mediterranean, such species are adult during the winter and early spring (Uvarov, 1966). A visit to Crete in April 1994 yielded adults of nine species of Orthoptera as follows:

TETRIGIDAE

Paratettix meridionalis (Rambur). Lake Kournas, 21.iv., abundant on the lake shore; Georgopolis, 25.iv., one pair collected from reedbed.

PYRGOMORPHIDAE

Pyrgomorpha conica (Olivier). Phaistos, 23.iv., one female; Agia Triada, near Phaistos, 23.iv., one male; Oasis Beach, Chania, 24.iv., one male (not collected); Stavros, 26.iv., two males.

ACRIDIDAE

TROPIDOPOLINAE

Tropidopola longicornis (Fieber). Georgopolis, 25.iv., two males, from reedbed. These grasshoppers cling to reed stems and shuffle round to the opposite side of the stem when approached. When disturbed, they fly in a caddis-like fashion to another plant.

EUPRECOCNEMINAE

Heteracris littoralis (Rambur). Kommos, 23.iv., two males, two females, from among low shrubs in sand dunes.

CYRTACANTHRIDINAE

Anacridium aegyptium (Linnaeus). Abundant in rough vegetation. Kalives; Lake Kournas; Chania airport; Georgopolis.

OEDIPODINAE

Aiolopus strepens (Latreille). Abundant in grassland. Kalives; Lake Kournas; Georgopolis.

Acrotylus insubricus (Scopoli). Golden Bay, Chania, 24.iv., one male.

GOMPHOCERINAE

Ochrilidia tibialis (Fieber). Stavros, 26.iv., one male, one female.

Chorthippus bornhalmi Harz. Phaistos, 23.iv., one male; Georgopolis, 25.iv., one female. Willemsse (1984) assigned the *Chorthippus* species which is widespread on Crete to *C. brunneus* (Thunberg) but later doubted its true identity (Willemsse, 1985). A second *Chorthippus* sp., which is morphologically quite a distinct form *C. brunneus*, *C. biroi* (Kuthy), is known to be endemic to montane areas of Crete. Recently the taxonomy of *C. brunneus* and closely related European species has been shown to be far more complex than formerly supposed. The sibling species which occur north of the Alps, *C. biguttulus* (Linnaeus) *C. brunneus* and *C. mollis* (Charpentier), are replaced in southern Europe by morphologically similar species that have different songs (Ragge & Reynolds, 1988). The song of the male collected at Phaistos was kindly recorded by Mr Nigel Tucker at the BBC Natural History Unit, Bristol and the recording analysed by Dr David Ragge. The song was indistinguishable from reference recordings of *C. bornhalmi*, a species already known from mainland Greece and the Balkans (Ragge *et al.*, 1990). It was concluded that the Cretan specimen, which was morphologically similar to reference specimens of *C. bornhalmi*, in the collection at BM(NH) should be assigned to this species, thus extending its known range to Crete.

Of the nine species collected as adults, *C. bornhalmi* is exceptional in representing a typically northern palaeartic genus and is presumably much more common on Crete during the summer. *Heteracris littoralis*, *Tropidopola longicornis* and *Ochrilidia tibialis* are widespread in North Africa and the Middle East and reach the fringes of southern Europe. The other species listed are widespread around the Mediterranean but all may be considered northern outliers of a tropical or subtropical fauna.

ODONATA

Only two species were seen: *Ceriagrion tenellum* Selys and *Ischnura elegans* van der Linden; both at Georgopolis in coastal seepages.

RHOPALOCERA

Although not especially sought, the following butterflies were recorded: *Papilio machon* L. – Laki; Phaistos. *Iphiclides podalirius* (L.) – Laki; Vamos. *Zerynthia cerisyi cretica* (Rebel) – Kalives; Vamos; Lake Kournas; Omalos; Laki; Asi Gonia; Spili; Akrotiri (most records were of single specimens but there were good colonies on a partly quarried hillside at Vamos and on the hills between Laki and Omalos). *Artogeia rapae* (L.) – common and widespread. *Euchloe simplonia* (Hübner) – Golden Bay, Chania; Georgopolis. *Colias croceus* (Geoffroy) – widespread. *Polyommatus icarus* (Rott.) – Vamos. *Polygonia egea* Cramer – Omalos. *Vanessa atalanta* (L.) – widespread. *Cynthia cardui* (L.) – common and widespread. *Pararge*

aegeria (L.) – Kalives. *Lasiommata megera* (L.) – Kalives. This species list is similar in its composition to the detailed account of Hardy (1994).

Crete is a fascinating island for the entomologist with species derived from several zoogeographical zones and with endemic elements. Several species of Orthoptera reach their northern limits in the reedbeds of the Cretan coast. They are vulnerable to the rapidly expanding coastal development of the island and should be considered in any conservation projects to save such habitats.

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“Mothathons” in Cornwall

As moth recorder for the Caradon Field and Natural History Club (formed 1984), I organised “mothathons” in 1987 and 1988 in south-east Cornwall. These were attempts to record as many moths and butterflies in a 24-hour period from midnight to midnight, in as many different habitats as were reasonably practical in this area. There was some discussion over the ground rules, so that the attempt one year could be replicated the next, introducing an air of competition. One of our number did not approve of the competitive angle and so only took part in one of the sessions.